

Contents

Data Mining & Web Mining

1.	Travel Package Recommendation System	1
	<i>Zin Mar Oo, Yi Yi Mon, Zin War Tun(University of Computer Studies, Monywa)</i>	
2.	Similarity Measurements of Outlier Detection for Trajectory Data	6
	<i>Nwe Nwe, (University of Computer Studies, Monywa)</i>	
3.	Comparison of Naïve Bayes, Multilayer Perceptron and Random Forest for Diabetes Classification	12
	<i>Khin Myo Myat (University of Computer Studies, Monywa), Sandar Aung(University of Computer Studies, Pakokku), San San Maw (University of Computer Studies, Mandalay)</i>	
4.	Study and Evaluation of Classification Algorithms for Breast Cancer Prediction	18
	<i>Nyein Nyein Ei, Yi Mar Myint(University of Computer Studies, Monywa)</i>	
5.	User-Based Approach of CF Method for Movie Rating Prediction	25
	<i>Mya Than Hnin, Thu Zar Htet, Pa Pa Win (University of Computer Studies, Meiktila)</i>	
6.	Keyword Extraction System using Word Co-occurrence and Chi-square Method	31
	<i>Khaing War Lwin, Yin Min Ei (University of Computer Studies, Monywa)</i>	
7.	Prediction the Student’s Understanding of the Subjects Using Neural Network and Decision Tree	38
	<i>Soe Soe New (University of Computer Studies, Monywa), Soe Moe Aye (University of Computer Studies, Mandalay)</i>	
8.	Cyber Bullying Detection using Sentiment Analysis	44
	<i>Haymar Phyoe, Nandar Win Min (University of Technology, Yatanarpon Cyber City)</i>	
9.	A Travel Guide System to Ancient Bagan Using Minimum Spanning Tree	50
	<i>San San Nwel, Aye Htike San, Lai Yi Aung (University of Computer Studies, Pakokku)</i>	
10.	Paper Retrieval System Using Dice Coefficient	57
	<i>Yin Wai Lwin (University of Computer Studies, Mandalay)</i>	
11.	Rule Extraction from Trained Neural Network for Prediction Loan Approval	64
	<i>Soe Moe Aye (University of Computer Studies, Mandalay), Aye Aye Naing (University of Computer Studies, Pakokku)</i>	
12.	Comparison of Frequent Itemsets Mining Based on Graph Theory	72
	<i>San San Maw (University of Computer Studies, Mandalay), Sandar Aung (University of Computer Studies, Pakokku), Khin Myo Myat (University of Computer Studies, Monywa)</i>	

Software Engineering

13. Integrating Security into Software Development Life Cycle (SDLC) 78
Mang Biak Sung ,Myint Myint Than (University of Computer Studies, Kalay)
14. Hypothetical Assessment of Quality and Productivity Based on IQR and Quartile Deviation Using Test-Driven Development to Unit Test 84
Myint Myint Moe (University of Computer Studies, Hpa-an), Khine Khine Oo(University of Computer Studies, Yangon)
15. Development of Software Development Workshop (SDW) Training Based on E-learning 90
Win Thanda Aung (University of Computer Studies, Panglong), Marlar Htun(University of Computer Studies, Pyay)
16. People Counting System using Haar-Like Features 94
Zaw Min Lwin,Soe Thidar (University of Computer Studies, Kalay)

Artificial Intelligence & Machine Learning

17. Detecting DDoS Attacks In IoT System Using Deep Neural Network 98
Ngu Wah Kyaw, Nandar Win Min (University of Technology, Yatanarpon Cyber City)
18. Hand Signals Classification Using CNN 104
Yin Nyein Kyaw, Tin Myint Naing (University of Technology, Yatanarpon Cyber City)

Big Data/IOT

19. Design and Implementation of IOT Based Home Automation System 109
Moe Moe Htun (University of Computer Studies, Kalay), Nay Lin Aung, Ye Htet Aung, (University of Computer Studies, Taungoo)

Cloud Computing

20. Privacy-Aware Access Control System in UCSH Private Cloud Using Identity- based Encryption (IBE) and Signature (IBS) 115
Ei Ei Mon,Win Win Thant (University of Computer Studies, Hinthada)

Image Processing

21. Iris Recognition Attendance System 124
Yi Yi Mon, Zin Mar Oo, Zin War Tun (University of Computer Studies, Monywa)
22. Signature Verification by Using Projection Profile 127
Yin Min Ei, Khaing War Lwin (University of Computer Studie, Monywa)
23. Face Sketch Image Category Classification Using Bag of Words (BoW) Model 135
Wai Hnin Eaindrar Mg,Tin Myint Naing (University of Technology, Yatanarpon Cyber City)

Natural Language Processing/ Speech Processing

24. A Study of Part Of Speech Tagging Approaches 143
Aye Myat Nyo, Tin Myo Latt, Day Si Win (University of Computer Studies, Monywa)
25. Combination of Beaufort and Caesar Cipher Using Myanmar -vignere Table 149
Swe Swe Htun (University of Computer Studies, Panglong)

Embedded System

26. Implementation of Arduino Based Voice Activated Home Automation System Using AMR 153
Kyaw Thiha, Kyaw Kyaw Aung, Swe Zin Kyaw (Technnological University, Toungoo)
27. Design and Implementation of Line Follower Robot Approach to Industrial Use 158
Hla Naing Win (University of Computer Studies, Monywa)
28. Design and Configuration for Educational Tool using 40 Cores Raspberry Pi Cluster 163
Mar Lar Win, Khin Mar Aye, Myo Hein Zaw (University of Computer Studies , Monywa)

Parallel & Distributed Computing

29. Design and Implementation of Super Cheap Computing Cluster Using Raspberry Pi for High Performance Computing 171
San San Aye, Mar Lar Win, Myo Hein Zaw (University of Computer Studies, Monywa)
30. A Practical Performance Comparison of Sequential and Parallel Sorting Algorithms on Rpi Cluster and Single Processor 176
Khin Nyein Myint, Myo Hein Zaw (University of Computer Studies , Monywa)
31. Raising the Processor Speed Beyond the Limits 182
Win Win Aung (University of Computer Studies, Monywa)
32. Practical Memory Allocation in Object Oriented Languages 188
Day Si Win, Win Win Aung, Aye Myat Nyo (University of Computer Studies, Monywa)
33. Selection of Best Alternative Route with Multi-Criteria Scheduling 194
Lai Lai Yi (University of Computer Studies, Sittway)

Network & Security

34. A Case Study on Design Approach of Campus Network Deployment 199
Khaing Khaing Wai (University of Computer Studies, Mandalay)
35. Benign and Malware: An Automated Fuzzy Logic Controlled Class 206
Chit La Pyae Myo Hein(University of Computer Studies, Monywa), Khin Mar Myo(Central Institute of Civil Service, Upper Myanmar)
36. Android Malware Detection and Characterization Based-on Network Traffic Flow 213
U Kyaw Naing Tun, ICT Department, Central Institute of Civil Services, Lower Myanmar), Zin May Aye (University of Computer Studies, Yangon), Kyaw Thet Khaing (Ministry of Education, Nay Pyi Taw)

Geographic Information System

37. Image Classification for Land Cover Analysis in Sagaing Region 220
Myint Myint Htay, Khin Nwe Oo (University of Computer Studies, Monywa)

Digital Signal Processing

38. Android App Based Home Automation System with Voice Recognition 226
Aye Sandar Win (University of Computer Studies, Hpa-An)

Wireless & Mobile Communication

39. Data Security for Android Software Downloading Application on Wireless and Mobile Communication 231
Yi Mar Myint, Nyein Nyein Ei(University of Computer Studies, Monywa)

Mathematics of Computing

40. Markov Chains Modelling for Improvement of Students' Quality 237
Ni Ni Win (Mandalay Technological University) ,Khaing Khaing Aye(Yangon Technological University)
41. Measures of Central Tendency 241
Ngwe Kyar Su Khain, Soe Soe Kyaw (Technological University, Yamethin)
42. An Innovation for Solving First Order Differential Equation with Special Reference to Exact Differential Equation 248
Khin Aye Tint (Technological University, Yamethin)
43. A Study on Poisson Equation with Dirichlet or Neumann Condition in a 2 Dimensional Ellipse 254
Thant Thant Soe (University of Computer Studies, Monywa)
44. Newton –Halley Iteration Formulae and Application 262
*Swe Zin Myint (Yangon Technological University),Aung Moe Khaing (Technological University, Thanlyin)
Toe Toe Thin (Yangon Technological University)*
45. Teaching of MATLAB Programming in Numerical Analysis for Students 268
Marlar Win Khin (University of Computer Studies, Banmaw)

Natural Science

46. Determining Liquids Level via Liquid Pressure by Using Microcontroller 276
Kyaw Toe Thein (Technological University, Banmaw)
47. Design, Simulation and Construction of Microcontroller Based Wind Power System 281
Kyaw Toe Thein (Technological University, Banmaw)
48. Indoor Radon Levels in Some Caves from Sagaing Hill 288
Win Win Maw (University of Computer Studies, Pakokku),Thet Thet Cho (University of Mandalay),Myo Thandar(University of Mandalay)
49. Study on Measurements of Gamma Radiations by G-M Sensor for Mn-54, Co- 60, Co-57, and Cd -109 Gamma Sources 293
Mar Mar Htay (Myanmar Institute of Information Technology)

Language Education

50.	A Preliminary Study of Continuing Professional Development (CPD) Awareness among Language Teachers <i>Kay Thi Soe (West Yangon Technological University)</i>	298
51.	Effective Teaching Productive Skills in Tertiary Level EFL Classrooms <i>May Thu Swe (Yangon Technological University)</i>	302
52.	Task-Based Learning Approach to Teaching Writing Skill <i>Su Su Latt (Technnological University,Mawlamyine),Ei Kay Khaing (University of Technology, Yatanarpone Cyber City)</i>	309
53.	Preparation and Practice for Improving Listening and Speaking Skills in Technological Universities <i>Aye Aye Win (Technnological University,Thanyin)</i>	314
54.	Some Interactive Teaching Methods for Developing Students' Speaking Skill <i>Khin Hnin Si(University of Computer Studies, Pakokku)</i>	320
55.	Improving English Ability of Intermediate (University) Level Students through the Teaching Oral Presentation Skill <i>Aung Kyaw Myint (Technnological University,Hmawbi)</i>	327
56.	Enhancing English Skills through Project-Based Learning <i>Nan Win Aung (University of Computer Studies, Monywa)</i>	332
57.	Information and Communication Technology Integrated in Language Classroom through Empirical Studies <i>N-Pri Moon,Daw Yu Yu Hlaing,Daw Yin Yin Newt (University of Information Technology)</i>	339
58.	Enhancing EFL Students' Motivation in Language through Cooperative Learning <i>Ei Kay Khaing (University of Technology, UTYCC),Su Su Latt (Technnological University,Mawlamyine)</i>	345
59.	Improving Writing Performance of Students in Large Classes through Mind Mapping Technique <i>May Zin Aye (University of Technology, UTYCC)</i>	350
60.	Some Effective Teaching And Learning Strategies of Conversational English for Intermediate Level Students <i>Hnin Yu Nwe (University of Computer Studies, Pakokku)</i>	355
61.	Developing the Reading Skill in English Through Interactive Reading Activities at Tertiary Level <i>Thaung Taung New (University of Computer Studies, Kalay),Yin Yin Aye (University of Computer Studies, Monywa)</i>	363
62.	Developing the Writing Skill of the First Year Students at the University of Computer Studies, Myitkyina, Through Text-based Reading <i>Swe Nwe Ah Ni Gar Aye (University of Computer Studies, Myitkyin)a, San Thida (University of Computer Studies, Banmaw)</i>	369
63.	Task-based Language Teaching and Learning through Supportive Materials <i>Ni Ni San (University of Computer Studies, Yangon), Daw Yin Yin Kyi (University of Computer Studies, Mandalay), Daw Soe Thandar (University of Computer Studies, Dawei)</i>	374
64.	Students' Perceptions of Task-based Learning Approach in English Speaking Class <i>Naw Wint Wint , May Pa Pa Khaing (Department of Languages, University of Computer Studies, Mandalay)</i>	381

65. Implementing Content-based Language Teaching Using Authentic Materials in English as a Foreign Language (EFL) Classrooms 389
Yin Yin Kyi (University of Computer Studies, Mandalay), Ni Ni San (University of Computer Studies, Yangon), Soe Thandar (University of Computer Studies, Dawei)
66. The Usefulness of Digital Technology in Language Classrooms 397
Thiri Kyaw (Technnological University, Magway), Khin Nandar Htun (University of Computer Studies, Mandalay)
67. Improving Students' Learning in English through the Reinforcement of External Motivational Factors 402
Moe Moe Win (Technnological University, Sagaing), Daw Khin Moe Myint (University of Computer Studies, Meiktila)